AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS:

1-14. (Canceled)

15. (New) A reinforcing bar binder comprising a storing chamber provided in a main body of the reinforcing bar binder for mounting a wire reel around which a wire for binding a reinforcing-bar is wound, the wire being twisted for binding the reinforcing bar after it is wound around the reinforcing bar, wherein

the storing chamber is provided with a first detecting apparatus and a second detecting apparatus;

the first detecting apparatus detects a first to-be-detected portion provided on the wire reel to detect an amount of rotation of the wire reel; and

the second detecting apparatus counts a second to-be-detected portion provided on the wire reel passing the second detecting apparatus during the amount of rotation of the wire reel detected by the first detecting apparatus.

16. (New) The reinforcing bar binder according to Claim 15, wherein the main body of the reinforcing bar binder is provided with a controller for controlling an amount of feeding of the wire or a twisting torque on the wire depending on the number of times the second-to-be detected portion is counted by the second detecting apparatus.

17. (New) The reinforcing bar binder according to Claim 15, wherein the first detecting apparatus is a contact-type sensor and the first to-be-detected portion is a convex portion or a concave portion which is detected by the contact-type sensor, while the second detecting apparatus is a non-contact type sensor and the second to-be-detected portion is a mark which is detected by the non-contact type sensor.

18. (New) The reinforcing bar binder according to Claim 16, wherein the first detecting apparatus is a contact-type sensor and the first to-be-detected portion is a convex portion or a concave portion which is detected by the contact-type sensor, while the second detecting apparatus is a non-contact type sensor and the second to-be-detected portion is a mark which is detected by the non-contact type sensor.

19. (New) A wire reel utilized in a reinforcing bar binder comprising a storing chamber provided in a main body of the reinforcing bar binder for mounting the wire reel around which a wire for binding a reinforcing-bar is wound, the wire being twisted for binding the reinforcing bar after it is wound around the reinforcing bar, wherein

the storing chamber is provided with a first detecting apparatus and a second detecting apparatus;

the wire reel is provided with a first to-be-detected portion and a second to-be-detected portion;

the first to-be-detected portion is detected by the first detecting apparatus to detect an amount of rotation of the wire reel; and

the second to-be-detected portion passing the second detecting apparatus during the amount of rotation of the wire reel detected by the first detecting apparatus is counted by the second detecting apparatus.

20. (New) The wire reel according to Claim 19, wherein the first detecting apparatus is a contact-type sensor and the first to-be-detected portion is a convex portion or a concave portion which is detected by the contact-type sensor, while the second detecting apparatus is a non-contact type sensor and the second to-be-detected portion is a mark which is detected by the non-contact type sensor.

21. (New) The wire reel according to Claim 19, wherein the wire reel is provided with a flange and a round concave portion formed on a central portion of the flange, and

the first to-be-detected portion is formed on the flange and the second to-be-detected portion is housed within the round concave portion.

22. (New) The wire reel according to Claim 20, wherein the wire reel is provided with a flange and a round concave portion formed on a central portion of the flange, and

the first to-be-detected portion is formed on the flange and the second to-be-detected portion is housed within the round concave portion.

23. (New) A wire-reel identifying method utilized with a reinforcing bar binder comprising a storing chamber provided in a main body of the reinforcing bar binder for mounting a wire reel around which a wire for binding a reinforcing-bar is wound, the wire being twisted for binding the reinforcing bar after it is wound around the reinforcing bar, the method comprising:

counting with a second detecting apparatus a second to-be-detected portion passing the second detecting apparatus during an amount of rotation of the wire reel detected by a first detecting apparatus.

24. (New) The wire-reel identifying method according to Claim 23, further comprising:

adjusting an amount of feeding of the wire or a twisting torque on the wire in accordance with a specific wire reel identified by the method.

25. (New) The wire-reel identifying method according to Claim 23, further comprising:

providing with the wire reel a flange and a round concave portion formed on a central portion of the flange; and

forming the first to-be-detected portion on the flange and housing the second to-be-detected portion within the round concave portion.

26. (New) The wire-reel identifying method according to Claim 24, further comprising:

providing with the wire reel a flange and a round concave portion formed on a central portion of the flange; and

forming the first to-be-detected portion on the flange and housing the second to-be-detected portion within the round concave portion.

27. (New) The wire-reel identifying method according to Claim 23, wherein the first detecting apparatus is a contact-type sensor and the first to-be-detected portion is a convex portion or a concave portion which is detected by the contact-type sensor, while the second detecting apparatus is a non-contact type sensor and the second to-be-detected portion is a mark which is detected by the non-contact type sensor.

28. (New) The wire-reel identifying method according to Claim 24, wherein the first detecting apparatus is a contact-type sensor and the first to-be-detected portion is a convex portion or a concave portion which is detected by the contact-type sensor, while the second detecting apparatus is a non-contact type sensor and the second to-be-detected portion is a mark which is detected by the non-contact type sensor.

29. (New) The wire-reel identifying method according to Claim 25, wherein the first detecting apparatus is a contact-type sensor and the first to-be-detected portion is a convex portion or a concave portion which is detected by the contact-type sensor, while the second detecting apparatus is a non-contact type sensor and

the second to-be-detected portion is a mark which is detected by the non-contact type sensor.

30. (New) The wire-reel identifying method according to Claim 26, wherein the first detecting apparatus is a contact-type sensor and the first to-be-detected portion is a convex portion or a concave portion which is detected by the contact-type sensor, while the second detecting apparatus is a non-contact type sensor and the second to-be-detected portion is a mark which is detected by the non-contact type sensor.

31. (New) A wire-reel identifying method comprising:

providing a first to-be-detected portion and a second to-be-detected portion on a wire reel;

detecting the first to-be-detected portion with a first detecting apparatus to detect an amount of rotation of the wire reel; and

counting the second to-be-detected portion with a second detecting apparatus during rotation of the wire reel to detect a type of the wire reel.

32. (New) The wire-reel identifying method according to Claim 31, further comprising:

adjusting a feed amount of a wire on the wire reel or a twisting torque on the wire in accordance with a specific wire reel identified by the method.

33. (New) The wire-reel identifying method according to Claim 31, further comprising:

providing with the wire reel a flange and a round concave portion formed on a central portion of the flange; and

forming the first to-be-detected portion on the flange and housing the second to-be-detected portion within the round concave portion.

34. (New) The wire-reel identifying method according to Claim 31, wherein the first detecting apparatus is a contact-type sensor and the first to-be-detected portion is a convex portion or a concave portion which is detected by the contact-type sensor, while the second detecting apparatus is a non-contact type sensor and the second to-be-detected portion is a mark which is detected by the non-contact type sensor.